

# LINK

THE NEWSLETTER OF THE GREAT LAKES REGIONAL  
POLLUTION PREVENTION ROUNDTABLE



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## 2007 SPRING MEETING WRAPUP

Pollution Prevention professionals, health experts, business leaders, and others shared their knowledge during the recent Great Lakes/Great Plains P2 Conference. The conference, which was a joint effort of U.S. EPA Regions 5 and 7, was held March 13-14 in the U.S. EPA building in Chicago. In advance of the conference, the Great Lakes Regional Pollution Prevention Roundtable (GLRPPR) Steering Committee held a meeting to discuss future goals and programs.

There were sixty registered participants for the conference. In addition, a number of EPA folks attended various sessions, participants in a nearby meeting joined one session, and there were even folks who listened into presentations by conference call.

The conference began with presentations from EPA leaders of Regions 5 and 7 discussing current and future projects. Also, leaders of the National Pollution

Prevention Roundtable (NPPR) spoke about the national program. The jam-packed agenda included sessions on:

- **Lean & Clean—Tools/Programs:** This session was a broad perspective of the application of Lean and Clean systems and tools used to improved environmental performance while increasing production efficiencies. It featured presentations from EPA officials and success stories from officials of Steelcase, Inc. and TechSolve Inc.
- **Stormwater Issues and the Housing Industry:** A discussion of a project in Wisconsin where government and homebuilders worked together to reduce storm water runoff. The session also featured an environmental consultant discussing new technical solutions for NPS reduction from urban land, both existing and new development.
- **P2 Intern Programs:** Officials from Regions 5 and 7 spoke about their successful programs and there was discussion about how to develop and improve such programs.
- **Mercury Reduction and Elimination Projects:** This featured presentations on the Great Lakes Mercury Phase-Down Strategy and on new designs to reduce dental mercury waste.

The second day of the conference began with an introduction to the Measurement Aggregation Tool and how it can be used to document a P2 program's success. Those seeking hands-on experience were able to get on computers and see how the program works. Other presentations were:

- A discussion about U.S. EPA and Illinois-Indiana Sea Grant Education and Outreach projects concerning prevention of open burning, pharmaceutical disposal, and electronic waste management.
- A presentation on the Chicago Waste to Profit Network
- Laura Brannen, Executive Director of Hospitals for a Healthy Environment presented information on a waste measurement tool that has been designed for health care.

The conference ended with an afternoon discussion of work being done to develop a Midwest Product Stewardship Council. Representatives from state and local governments in EPA Regions 5 and 7 are discussing the project.

The presentations from the Great Lakes/Great Plains P2 Conference can be found on the GLRPPR Web site at: <http://www.glrppr.org/meetings/Spring2007/>.

## NEW TOOLKIT PROVIDES GREAT LAKES COMMUNITIES WITH RESOURCES TO STOP BACKYARD BURNING OF HOUSEHOLD GARBAGE

Waste disposal by burning household garbage continues to be a common practice in rural communities. This custom goes by many names, including backyard burning, burn barrels, and household garbage burning. But whether the garbage is burned in a barrel, pit, or fireplace, the result is a combination of toxic air pollutants that poses dangers to human and ecological health.



*Disposal of household garbage by burning continues to be a common practice in rural communities*

Smoke from burning waste contains many pollutants that can hurt the health of people exposed to it. These pollutants can damage the lungs, nervous system, kidneys, and liver. Even healthy people may experience symptoms of burning eyes, headaches, nausea, fatigue, or dizziness. Backyard burning also triggers numerous wildfires and can be a nuisance to neighbors. These toxic chemicals may deposit from the air directly into aquatic or terrestrial environments, and contribute to non-point sources of pollution in the region's rivers and lakes, including the Great Lakes. The prevalence of garbage burning can affect states' and municipalities' ability to meet air-quality standards as well.

Mounting evidence from U.S. Environmental Protection Agency indicates household garbage burning presents an even more serious threat to public health and the environment than previously believed due to the large production of dioxin. Backyard burning is now the largest quantified source of dioxin releases in the nation. Dioxin forms whenever products containing chlorine are burned and only minute amounts of chlorine are required for this chemical reaction. Dioxin from burning settles from the air onto the surfaces of leaves, grass, and crops. It enters the food chain when eaten by animals. It accumulates in animal fat and enters the human body through dairy products, meat, and fish. Dioxin levels in fresh water fish, including Great Lakes fish, are found to be higher than compared with marine species. Dioxin collects in human tissue over a person's entire lifetime. Dioxin poses dangers even at extremely low levels and has been linked to several human cancers, including lymphoma and lung cancer.

EPA has placed strict air emission controls on municipal-waste burners and medical waste incinerators, which has led to a 99 percent reduction in dioxin emissions from these sources since 1990. However, these controls cannot be replicated in barrels or pits. Low-combustion temperatures and poor air circulation in backyard burning situations cause incomplete combustion and promote dioxin production.

While progress has been made in reducing industrial dioxin emissions, it is vital to reduce human exposure to dioxin compounds from other sources. Household garbage burning is often conducted near crops and livestock or near open water. Since the main exposure route to humans involves food intake, it is important that we take steps to reduce the reliance of individuals and communities on uncontrolled garbage burning.

The good news is that EPA and the Great Lakes states are actively looking at backyard burning and researching new options for garbage disposal in rural areas. Some local governments are already banning or restricting garbage burning in their jurisdictions. It is important to recognize that not all areas in the Great Lakes Basin currently have infrastructure for garbage collection and recycling. Communities will need to work with state and local officials to develop long-term solutions to garbage disposal.



*Chisago County, MN, offered a "Burn Barrel Buy Back" program. Residents could exchange their burn barrels for six months of discounted trash pickup service.*

U.S. EPA Region 5 and Illinois-Indiana Sea Grant have developed an outreach toolkit on reducing household trash burning. The toolkit entitled "Learn Not to Burn: A Guide for Reducing Trash Burning in Your Community" provides a wide variety of materials to assist local communities including a set of case studies which provide viable alternatives to burning. The case studies repeatedly demonstrate that significant behavioral change can be realized once the public is educated on the hazards of backyard burning. The toolkit also includes a background presentation on the environmental impacts of backyard burning, example outreach materials, information on burn barrel ordinances for Great Lakes states, and information on solid waste ordinances and waste transfer stations. For more information or to receive a toolkit, contact Erin Newman at 312-886-4587 (e-mail [newman.erin@epa.gov](mailto:newman.erin@epa.gov)) or Susan Boehme at 312.353.4383 (email [Boehme.susan@epa.gov](mailto:Boehme.susan@epa.gov)).

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*Smoke from burning waste contains many pollutants that can impact the health of people exposed to it, including hydrogen cyanide, sulfur dioxides, polycyclic aromatic hydrocarbons, benzene, lead, mercury, dioxin, and many others.*

## 2007 SMALL BUSINESS OMBUDSMAN/SMALL BUSINESS ENVIRONMENTAL ASSISTANCE PROGRAM NATIONAL CONFERENCE

The 2007 Small Business Ombudsman/ Small Business Environmental Assistance Program National Conference will be held at the Crowne Plaza Riverfront Hotel in Saint Paul, MN from June 18th-21st. This conference brings together state small business programs, EPA, and others to discuss environmental issues affecting small businesses. Session topics range from updates on environmental regulations to incorporating P2 into compliance assistance. For more information about the conference or registration, visit [www.sbeapconference.com](http://www.sbeapconference.com).

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## ILLINOIS GOVERNOR'S P2 AWARDS APPLICATIONS BEING ACCEPTED

The Waste Management and Research Center (WMRC)-a division of the Illinois Department of Natural Resources (IDNR)-is now accepting applications for the annual Illinois Governor's Pollution Prevention Awards that honor companies and organizations for their efforts to prevent pollution.

"Organizations that lead the way in finding and using new methods to reduce waste and protect the environment contribute to a healthier Illinois," said Gov. Blagojevich. "Anyone who makes an ongoing commitment to prevent pollution that, in the long run, will make their employees and our communities healthier is encouraged to apply."

Since 1987, the WMRC has presented the Governor's Pollution Prevention Awards to companies and organizations in Illinois that have demonstrated a commitment to environmental excellence through the practice of pollution prevention. Any Illinois public or private organization is eligible to apply for an award. Continuous Improvement Awards are given to companies that have shown an ongoing commitment to pollution prevention.

Information about the Governor's Pollution Prevention Awards and an application are available online at: [www.wmrc.uiuc.edu/gp2a/](http://www.wmrc.uiuc.edu/gp2a/). To receive an application in the mail contact Bob Iverson, Information Services Manager, at 217-333-8940 or e-mail [biverson@wmrc.uiuc.edu](mailto:biverson@wmrc.uiuc.edu).

The application due date is May 21, 2007. Technical experts from WMRC will review applications and site visits may be performed. The Governor's office makes the final award decisions. Winners will be announced at the Governor's Pollution Prevention Awards banquet on Wednesday, October 24, 2007 at the Abbington in Glen Ellyn.

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## APPLICANTS SOUGHT FOR NEW AWARD

The Illinois Waste Management & Research Center (WMRC) is seeking applicants for the new Illinois Sustainable Technology Award.

The Sustainable Technology Award recognizes a novel technology that leads to significant waste reduction or elimination. Applicants must illustrate how innovative the new technology is, discuss the long-term beneficial impact of the technology on the environment in Illinois, and show how it has been implemented.

This award comes with a scholarship, provided by external sources, which goes to an Illinois resident attending a college or university. The Sustainable Technology Award is an expansion of the Innovate Illinois Award formerly presented by WMRC.

Information about the Illinois Sustainable Technology Award is available on the WMRC Web site: [www.wmrc.uiuc.edu](http://www.wmrc.uiuc.edu). The application due date is May 21, 2007. Technical experts from WMRC will review applications and site visits may be performed. The winner will be announced in October.

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## Coming Soon...Summer 2007 Edition

The LINK summer 2007 article solicitation will be sent to GLRPPR members via e-mail on or about June 1; articles will be due June 29. Send article ideas or questions to Wayne Duke at [wduke@wmrc.uiuc.edu](mailto:wduke@wmrc.uiuc.edu).

## EMERGING GREEN BUILDERS 2007 NATURAL TALENT DESIGN COMPETITION

The West Michigan Chapter of the U.S. Green Building Council is launching the first Emerging Green Builders—Natural Talent Design Competition in the State of Michigan.

Seven Universities are fielding 15 design teams, and two individuals in the Young Professionals category will submit designs to meet LEED Existing Building (EB) criteria on a project identified in Grand Rapids.



*Students in Training Comp  
Renew Environmental*

Comp Renew Environmental has been chosen for a LEED-EB design project for the 2007 Emerging Green Builders Design Competition. The competition will provide an opportunity for college students to gain experience in sustainable design, and will help elevate public awareness of green building practices.

Comp Renew Environmental is a nonprofit organization that uses the business of electronic waste recycling to provide unique educational opportunities to high school students. By combining real-life work experiences, hands-on training, and instruction in environmental practices, this educational enterprise seeks to strengthen the community and provide future leaders in sustainable business. This organization was chosen for the purpose of being able

to launch a community-based organization into the spotlight of environmental protection, career development, and training.

Participating design teams hail from the following Michigan universities:

- Andrews University
- Kendall College of Art and Design
- Ferris State University
- Grand Valley State University
- Lawrence Tech
- Michigan Tech
- University of Michigan

Young Professionals are from:

- Design Plus
- RHG Design

Rick Fedrizzi, President of the USGBC will be visiting West Michigan on April 24, 2007 to speak at a local luncheon for community officials and sponsors. He will also be present at the evening gala event to present the 2007 Emerging Green Builders Natural Talent awards to the winning entries.

The winning design and team will participate in the National Competition at the U.S. Green Building Council Green Build Conference in Chicago in November 2007.

For more information: <http://chapters.usgbc.org/westmichigan/EGB.html>.

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## INDIANA'S DEVELOPMENT OF CLEAN MARINA PROGRAM

In 2006 the Indiana Department of Natural Resources (IDNR) and the Indiana Department of Environmental Management (IDEM) began a collaborative effort to develop a Clean Marina Program. The Indiana Clean Marina Program will be part of a larger effort to reduce nonpoint source pollution throughout waters of the state. The program will first be piloted in the Lake Michigan coastal area where the state's largest marinas exist. This voluntary and incentive based program will encourage marinas and recreational boaters to engage in clean boating practices and use environmentally sound operating and maintenance procedures. Those marinas that meet a minimum number of Best Management Practices (BMP's) will be designated as Indiana Clean Marinas. A significant component of this program will be the development of a Clean Marina Guidebook. This guidebook will provide background information on a number of pollutants typically generated by marinas and recreational boaters as well as the BMP's that can be implemented to prevent those pollutants from entering our waterways. A few of the pollutants typically generated by marinas and recreational boaters include: hydrocarbons from fueling, pathogens from overboard sewage discharge, and toxic metals and



compounds from hull and boat maintenance. Additionally, the guidebook will provide information on how recreational boaters can prevent the spread of aquatic invasive species. The IDNR hopes to have the guidebook and associated outreach available to the marinas and recreational boaters by fall 2007. For more information on the Indiana Clean Marina Program, please contact Joe Exl, Coastal Nonpoint Coordinator with the IDNR's Lake Michigan Coastal Program at 219-921-0863 or [jexl@dnr.in.gov](mailto:jexl@dnr.in.gov).

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## GOVERNOR DANIELS PRAISES 14 HOOSIER COMPANIES FOR ENVIRONMENTAL LEADERSHIP

Governor Mitch Daniels and the Indiana Department of Environmental Management (IDEM) recently announced the charter members of Indiana's Environmental Stewardship Program (ESP). Similar to the U.S. Environmental Protection Agency's National Environmental Performance Track Program (NEPT), ESP combines the elements of an environmental management system, history of regulatory compliance, and continuous environmental improvement projects to create a solid program that yields environmental benefits.

These companies are ESP's charter members:

- American Commercial Lines LLC (Jeffersonville, Clark County)
- ICON Metal Forming, LLC (Corydon, Harrison County)
- Jeffboat LLC (Jeffersonville, Clark County)
- Karl Schmidt Unisia, Inc. (Fort Wayne, Allen County)
- Louisiana Pacific Corporation (Middlebury, Elkhart County)
- Mead Johnson & Company, (Evansville & Mt. Vernon, Vanderburgh County)
- OFS Brands, Inc. (Huntingburg, Dubois County)
- Pfizer, Inc. (Terre Haute, Vigo County)
- Quality Machine and Tool Works (Columbus, Bartholomew County)
- Raytheon Technical Services Company, LLC (Indianapolis, Marion County)
- Tinnerman Palnut Engineered Products, Inc. (Logansport Plant, Cass County)
- Total Interior Systems America, LLC (Princeton, Gibson County)
- Toyota Industrial Equipment Manufacturing, LLC (Columbus, Bartholomew County)
- Toyota Motor Manufacturing, Princeton (Gibson County)

The charter members have committed to continuous improvement in the coming three years. Collective efforts during their first year of membership will result in these reductions:

- Energy usage by approximately 137,876 megawatt hours, an amount comparable to the electricity that 12,500 households consume each year;
- Hazardous material procurement and waste by 292 tons, an amount comparable to sixteen (16) tanker trucks of liquid hazardous waste;
- Carbon dioxide by approximately 331 metric ton equivalents, an amount comparable to removing 58 cars from the road for an entire year;
- Volatile organic compound emissions by 157 tons, an amount comparable to emissions from painting the interiors of 13,083 homes; and
- Non-hazardous waste by 6,603 tons, an amount comparable to the solid waste that 8,000 households generate each year.

The charter members announced have met ESP's requirements for proven environmental compliance and environmental

## Upcoming Events

Engineering Sustainability 2007, Apr. 15 - 18

Momentum, ISRI's 2007 Convention and Exposition, Apr. 18 - 21

07 Chicago Green Festival, Apr. 21 - 22

2nd National Conference on Ecosystem Restoration, Apr. 22 - 27

Earth Day, Apr. 22

Living Green Expo, May 5 - 6

2007 National Clean Water Policy Forum, May 6 - 7

2007 H2E Environmental Excellence Awards & Pharmaceutical Waste Disposal Wksp, May 14 - 15

The Green House: An Exhibition of the National Building Museum, May 20 - June 3

EECO 2007 Environment & Energy Conference, June 19 - 20

11th Annual Green Chemistry & Engineering Conference, June 25 - 28

For more information on these upcoming events visit <http://www.glrppr.org/calendar/>

management system implementation. Each business also has planned a specific project or projects aimed at any or all of the following environmental objectives: reducing solid and hazardous waste; conserving water, electricity, and natural resources; enhancing recycling; educating, and training employees; or reducing harmful air emissions. In addition to public recognition through ESP, rewards can include expedited permit review, flexibility in permitting, reduced reporting frequencies, and coordination of compliance inspections. To maintain membership, companies must reapply every three years.

To become a member of ESP, a facility must have a positive record of compliance with environmental laws and commit to maintaining an exemplary compliance record; must certify that they have adopted and implemented an environmental management system that meets ESP requirements; and must commit to continued improvement in their performance by outlining specific environmental improvements they will make each year of their membership. For details about IDEM's ESP program, visit IDEM's Web site at <http://www.idem.IN.gov/prevention/esp>.

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## THE MNTAP INTERN PROGRAM

By investing heavily in a few waste reduction intern projects, MnTAP's strategy hedges that each project has its greatest chance at impact. From 1996 to 2006, suggestions implemented from the projects saved companies an average of \$505,300 per year, counting only documental, first year savings. MnTAP's intern projects have a 33 percent return on investment—for every \$1 MnTAP invests in its projects, companies save \$3. On average, the intern projects account for 21 percent of MnTAP's overall economic impact reported annually.



*Deb McKinley, MnTAP, met with Mike Reznicek, Tennant Company, to discuss the company's 2006 intern project.*

Limited by budget and staff resources, MnTAP funds only six to eight student intern projects every summer. With this small number, MnTAP tries to maximize each project and leverages them with its grant work—using the projects to both demonstrate capability through past work and as grant project deliverables.

Looking ahead to summer 2007, four of the currently planned intern projects support MnTAP's grant work under U.S. DOE "Energy Efficiency and Pollution Prevention for Minnesota's Energy Intensive Industries" and U.S. EPA "A Regional Pilot to Promote Pollution Prevention Technology Diffusion."

A review of 14 completed grant reports and current grant agreements from 1999 to 2007 showed that only one grant did not reference MnTAP's student intern program. Eight grants had intern projects as deliverables. Of the six with no intern project obligation, four included results documented from intern projects.

MnTAP intern program: <http://mntap.umn.edu/intern/index.htm>

Great Lakes/Great Plains P2 Conference presentation: <http://www.glrppr.org/meetings/Spring2007/presentations/3-13-1500-McKinley.ppt>

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## PHARMACEUTICAL WASTE REDUCTION

The Minnesota Technical Assistance Program (MnTAP) has developed a Web page for pharmacy waste reduction: <http://mntap.umn.edu/health/pharm.htm>. Among the resources posted is MnTAP's new fact sheet [Reducing Pharmaceutical Waste from Patient Care Settings](#) which offers guidance on how to minimize the amount of unwanted or expired medication, including information on epinephrine, purchasing/inventory management and sample waste. This information is based on results of intern projects at Tri-County Hospital and Hennepin County Medical Center from summer 2006.

MnTAP conducted a pharmacy focus group on March 22, 2007, to generate input to help guide the development of resources to assist pharmacies with reducing their waste. Catherine Zimmer, MnTAP's health care specialist, is helping

plan the following events for pharmacies:

- Pharmaceutical Waste Management Workshop will be part of the 2007 Hospitals for a Healthy Environment (H2E) Environmental Excellence Summit in Minneapolis, MN, on May 15, 2007.
- Reducing Pharmaceutical Waste will be presented at the Pharmacy Society of Wisconsin Annual Meeting in La Crosse, WI, on September 8, 2007.

See MnTAP's online calendar for more information: <http://mntap.umn.edu/resources/cal.htm>.

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## MERCURY PRODUCT BAN COMES TO OHIO

Under a new law to reduce mercury in Ohio's environment, schools will not be permitted to buy mercury or mercury-added measuring devices for classroom use starting April 6, 2007. Six months later, Ohio will ban the sale and distribution of mercury-containing thermometers and novelty items. Beginning April 6, 2008, a ban on the sale and reinstallation of mercury-containing thermostats will go into effect.

The law states that no manufacturer can offer a mercury-containing thermometer or thermostat for sale or distribution in Ohio. Exceptions for thermometers include a device required to comply with federal law, or required as the only feasible tool available for purposes specified in the law. Exceptions for thermostats include residences with a visually impaired person, or a manufacturing process where the device is used to sense and control temperature.

In addition, the law bans the sale or distribution of novelty items, such as games, figurines, toys, cards, ornaments, yard statues, candles, jewelry, decorations, footwear, and other apparel. This excludes items that only contain the mercury found in a button-cell battery. Novelty items with button-cell batteries will be added to the ban on January 1, 2011.

For more information on the mercury law, contact Bill Narotski at Ohio EPA's Office of Compliance Assistance and Pollution Prevention (OCAPP) at 614-644-3469. A fact sheet providing additional detail on the law is available at: [http://www.epa.state.oh.us/ocapp/p2/mercury\\_pbt/fact115.pdf](http://www.epa.state.oh.us/ocapp/p2/mercury_pbt/fact115.pdf). In addition, the text of the mercury law can be found at: [http://www.epa.state.oh.us/ocapp/p2/mercury\\_pbt/substitute%20bill%20443.pdf](http://www.epa.state.oh.us/ocapp/p2/mercury_pbt/substitute%20bill%20443.pdf).

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## FINE PRINT

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